2012 Full HD Enhanced HD-SDI Solution

DK SOLUTIONS

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Advantage of Mega Pixel Camera

1. Reducing the number of cameras deployed
- Improved coverage
- Allows digital PTZ with little loss of details

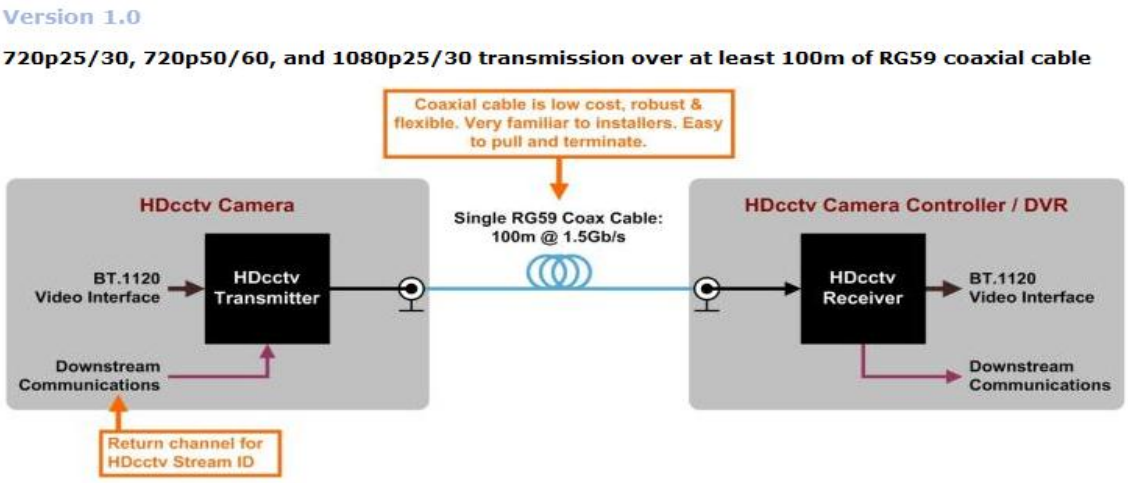
2. Increasing the quality of the video
- Improved detection
- Increased evidentiary acceptance

Why HD-SDI Video?

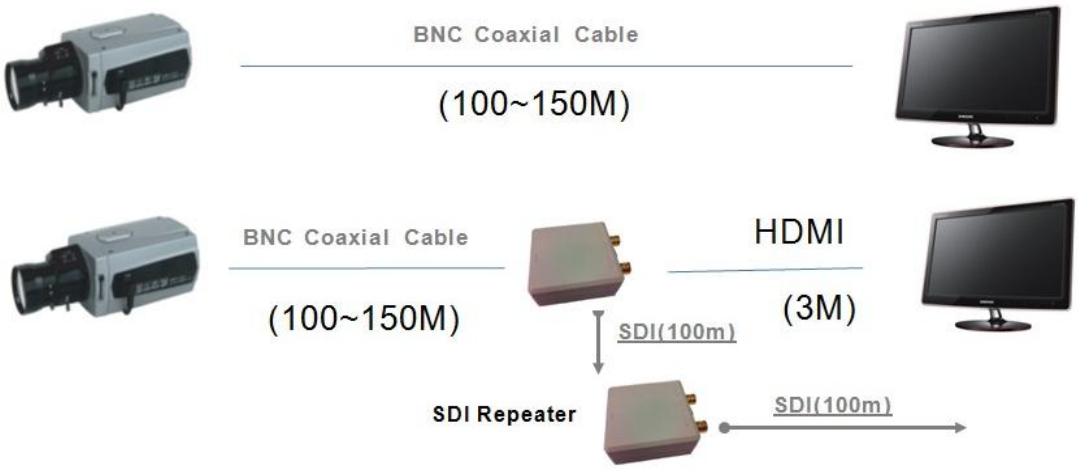
Display Supplies Visual Information to Human Eyes
- Customer want better video
- HD lets you see the details you need
- Customers want megapixel resolution
- You can get HD without headaches of IP
- HD-SDI products are easy to sell
- Reuse your existing infrastructure

Definition of HD-SDI Video

1. Full HD(High Definition) Video
2. Digital Signal
3. Transmission over coaxial cable


Version 1.0
720p25/30, 720p50/60, and 1080p25/30 transmission over at least 100m of RG59 coaxial cable
Coaxial cable is low cost, robust & flexible. Very familiar to installers. Easy to pull and terminate.
HDcctv Camera
BT.1120 Video Interface
HDcctv Transmitter
Downstream Communications
Return channel for HDcctv Stream ID
Single RG59 Coax Cable: 100m @ 1.5Gb/s
HDcctv Camera Controller / DVR
HDcctv Receiver
BT.1120 Video Interface
Downstream Communications

Basic Configuration



Advantage of HD-SDI Video Solution

1. *Surveillance-Grade Reliability*
2. *Plug-and-Play Resolution Upgrade*
3. *Familiar and Reliable User Interface*
4. *True HDTV Live View*
5. *Real-Time Speed Dome Control*
6. *Best Possible Input Format for Analytics*

Benefits

Market	Application	Benefits
Surveillance	Train Banking Casino	Real time application Easy upgrade from analogue to Full HD quality systems
Image Processing	Vehicles plate number reorganization Traffic surveillance	Wide area observation by 16:9 HD aspect ratio Human face recognition with high resolution
Medical	Operation room Slit lamp	High contrast, seeing dark area
Broadcast	Sports Remoteness	Diversified images

Comparison of HD-CCTV and IP Megapixel

	HD-CCTV	IP Megapixel
Image Lag	Almost none	Depend on FPS and Network Bandwidth
Transmission Distance without Distance	250Meters(RG59U)	100Meters(Cat 5)
DVR Storage Availability	Yes(SDI DVRs)	Yes
Plug and Play	Yes	Limited
IP Networking Functions	Needs DVR	Yes(NVR or Router)
Power over Cable	Yes(PoC)	Yes(PoE)
HDRV Full SMPTE Format	Yes(720P,1080P) 30/60fps	Yes(720P,1080P) 30/60fps
Global Interface Standard	Yes(SMPTE-292)	No
VMS Management Functionality	None(DVR Only)	Yes(Flexible)

RSC-M13DS · RSC-M20DS

720P/1080p HD-SDI Box Camera with 1/3" Panasonic, True Day & Night

High Definition solution to your business and security

FEATURES

- 1/3" Panasonic Progressive Scan CMOS imager
- 1280x720(60/50p)/1920x1080(30/25p) with 1.3MP/2MP Sensor
- 16:9 Video formats for most popular commercial HDTV monitors
- Switchable HDTV standard for EU and US in menu
- Auto TDN without focus shift by dual filter switcher
- Patented Exact FOCUS setting aid
- Smart 3DNR
- 1.5G HD-SDI Video transmission though single coaxial cable
- Max. 100~140M transmission distance through 5C2V or RG-59
- RS-485 remote control supporting Pelco-D
- NTSC/PAL auxiliary video output for installation & maintenance
- Flicker less mode for 50(60)Hz area at US(EU) HDTV standard

SPECIFICATIONS

Model	RSC-M13DS	RSC-M20DS
Image Sensor	1/3" Panasonic Progressive scan MAICOVICON RGB CMOS	
Total Pixel	1376H x 1070V	2010H x 1108V
Min. Illumination	0.003Lux @ B/W, 4x Sense-Up, F1.4, 40IRE	
Output Video Resolution	1280x720 60p/50p	1920x1080 30p/25p
S/N ratio	50dB (AGC off)	
Day & Night	TDN by dual filter switcher, AUTO, COLOR, B/W, EXT	
Lens	C/CS mount	
Noise Reduction	Smart 3DNR, 2DNR	
Sense-UP	2x ~ 30x	2x ~ 60x
White Balance	ATW, AWC ⇒ SET, INDOOR, OUTDOOR, MANUAL	
Electronic shutter	1/50(1/60) ~ 1/50,000s	1/25(1/30) ~ 1/50,000s
Function	3DNR, SMART IR, ACCE(D-WDR), MOTION DETECT, PRIVACY MASK, MIRROR, BLC/HLC, Digital ZOOM, Anti Fog	
OSD Language	English, Japanese, Chinese	
Exact FOCUS Setting Aid	Patented Day/Night simulation & Magnification on Aux. video	
Aux. Video Output	NTSC/PAL standard, 1Vpp @ 75Ωterminated	
Power	AC24V±20%, DC11.5V ~ DC30V	
Operating Environment	-10℃ ~ 50℃, 30 ~ 80% RH (Non-condensing)	
Video Output(HD)	1.485Gbps HD-SDI (SMPTE 292M) thru 75ΩMCX conn.	
HD Transmission Distance	100 ~ 140M @ 5C2V or RG-59 (depending on cable quality)	
Housing	Aluminum Housing	
Dimension	65(W) x 55(H)x125(L) mm, about 270g (Net)	

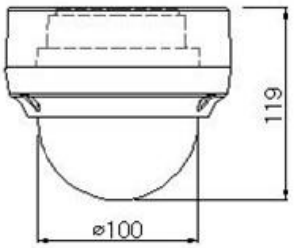
RSV-M13DSnn-IR · RSV-M20DSnn-IR

720p/1080p HD-SDI Vandal Dome Camera with 1/3" Panasonic, True Day & Night

High Definition solution to your business and security

FEATURES

- 1/3" Panasonic Progressive Scan CMOS imager
- 1280x720(60/50p) / 1920x1080(30/25p) with 1.3MP/2MP Sensor
- 16:9 Video formats for most popular commercial HDTV monitors
- Switchable HDTV standard for EU and US in menu
- Auto TDN without focus shift by dual filter switcher
- Patented Exact FOCUS setting aid
- Smart IR support
- Smart 3DNR
- Remote control for ZOOM and FOCUS (option)
- 1.5G HD-SDI Video transmission though single coaxial cable
- Max. 100~140M transmission distance through 5C2V or RG-59
- RS-485 remote control supporting Pelco-D
- NTSC/PAL auxiliary video output for installation & maintenance
- Flicker less mode for 50(60) Hz area at US (EU) HDTV standard
- External Focus & Zoom Adjustment
- One Touch 3 Axis Bracket



SPECIFICATIONS

Model	RSV-M13DSnn-IR	RSV-M20DSnn-IR
Image Sensor	1/3" Panasonic Progressive scan MAICOVICON RGB CMOS	
Total Pixel	1376H x 1070V	2010H x 1108V
Min. Illumination	0.003Lux @B/W, 4x Sense-Up, F1.4, 40IRE	
Output Video Resolution	1280x720 60p/50p	1920x1080 30p/25p
S/N ratio	50dB(AGC off)	
Day & Night	TDN by dual filter switcher, AUTO, COLOR, B/W, EXT	
Lens support	nn: 39=3-9mm, 2810=2.8-10mm DC drive lens (Other lens option is available)	
LEDs	Built-in 40pcs x 850nm Infrared LEDs	
Protection Rating	IP68	
Noise Reduction	Smart 3DNR, 2DNR	
Sense-UP	2x ~ 30x	2x ~ 60x
White Balance	ATW, AWC ⇒ SET, INDOOR, OUTDOOR, MANUAL	
Electronic shutter	1/50(1/60) ~ 1/50,000s	1/25(1/30) ~ 1/50,000s
Function	3DNR, SMART IR, ACCE(D-WDR), MOTION DETECT, PRIVACY MASK, MIRROR, BLC/HLC, Digital ZOOM, Anti Fog	
OSD Language	English, Japanese, Chinese	
Exact FOCUS Setting Aid	Patented Day/Night simulation & Magnification on Aux. video	
Remote Control	RS-485 supporting Pelco-D	
Aux. Video Output	NTSC/PAL standard, 1Vpp @ 75Ωterminated	
Power	AC24V ±20%, DC11.5V ~ DC30V	
Operating Environment	-10°C ~ 50°C, 30 ~ 80% RH (Non-condensing)	
Video Output(HD)	1.485Gbps HD-SDI (SMPTE 292M) thru 75ΩMCX conn.	
HD Transmission Distance	100 ~ 140M @ 5C2V or RG-59 (depending on cable quality)	
Housing	Aluminum Housing	
Dimension	107.8mm(W) x 90.4mm(H), about 1.35kg	

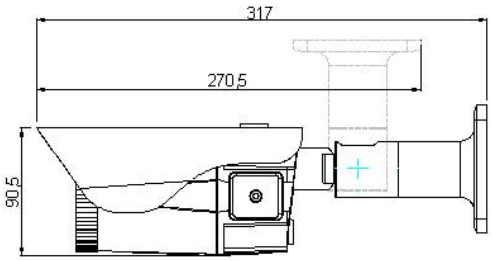
RWT-M13DSnn-IR · RWT-M20DSnn-IR

720p/1080p HD-SDI IR Bullet Camera with 1/3" Panasonic, True Day & Night

High Definition solution to your business and security

FEATURES

- 1/3" Panasonic Progressive Scan CMOS imager
- 1280x720(60/50p) / 1920x1080(30/25p) with 1.3MP/2MP Sensor
- 16:9 Video formats for most popular commercial HDTV monitors
- Switchable HDTV standard for EU and US in menu
- Auto TDN without focus shift by dual filter switcher
- Patented Exact FOCUS setting aid
- Smart IR support
- Smart 3DNR
- Remote control for ZOOM and FOCUS (option)
- 1.5G HD-SDI Video transmission though single coaxial cable
- Max. 100~140M transmission distance through 5C2V or RG-59
- RS-485 remote control supporting Pelco-D
- NTSC/PAL auxiliary video output for installation & maintenance
- Flicker less mode for 50(60) Hz area at US (EU) HDTV standard
- External Focus & Zoom Adjustment
- One Touch 3 Axis Bracket



SPECIFICATIONS

Model	RWT-M13DSnn-IR	RWT-M20DSnn-IR
Image Sensor	1/3" Panasonic Progressive scan MAICOVICON RGB CMOS	
Total Pixel	1376H x 1070V	2010H x 1108V
Min. Illumination	0.003Lux @ B/W, 4x Sense-Up, F1.4, 40IRE	
Output Video Resolution	1280x720 60p/50p	1920x1080 30p/25p
S/N ratio	50dB (AGC off)	
Day & Night	TDN by dual filter switcher, AUTO, COLOR, B/W, EXT	
Lens support	nn: 39=3-9mm, 2810=2.8-10mm DC drive lens (Other lens option is available)	
LEDs	Built-in 40pcs x 850nm Infrared LEDs	
Protection Rating	IP68	
Noise Reduction	Smart 3DNR, 2DNR	
Sense-UP	2x ~ 30x	2x ~ 60x
White Balance	ATW, AWC ⇒ SET, INDOOR, OUTDOOR, MANUAL	
Electronic shutter	1/50(1/60) ~ 1/50,000s	1/25(1/30) ~ 1/50,000s
Function	3DNR, SMART IR, ACCE(D-WDR), MOTION DETECT, PRIVACY MASK, MIRROR, BLC/HLC, Digital ZOOM, Anti Fog	
OSD Language	English, Japanese, Chinese	
Exact FOCUS Setting Aid	Patented Day/Night simulation & Magnification on Aux. video	
Remote Control	RS-485 supporting Pelco-D	
Aux. Video Output	NTSC/PAL standard 1Vpp @ 75Ωterminated	
Power	AC24V ±20% , DC11.5V ~ DC30V	
Operating Environment	-10℃ ~ 50℃, 30 ~ 80% RH (Non-condensing)	
Video Output(HD)	1.485Gbps HD-SDI (SMPTE 292M) thru 75ΩMCX conn.	
HD Transmission Distance	100 ~ 140M @ 5C2V or RG-59 (depending on cable quality)	
Housing	Aluminum Housing	

CCTV21-MP2301

1080p HD-SDI Box Camera with 1/3" Sony, True Day & Night and WDR

High Definition solution to your business and security

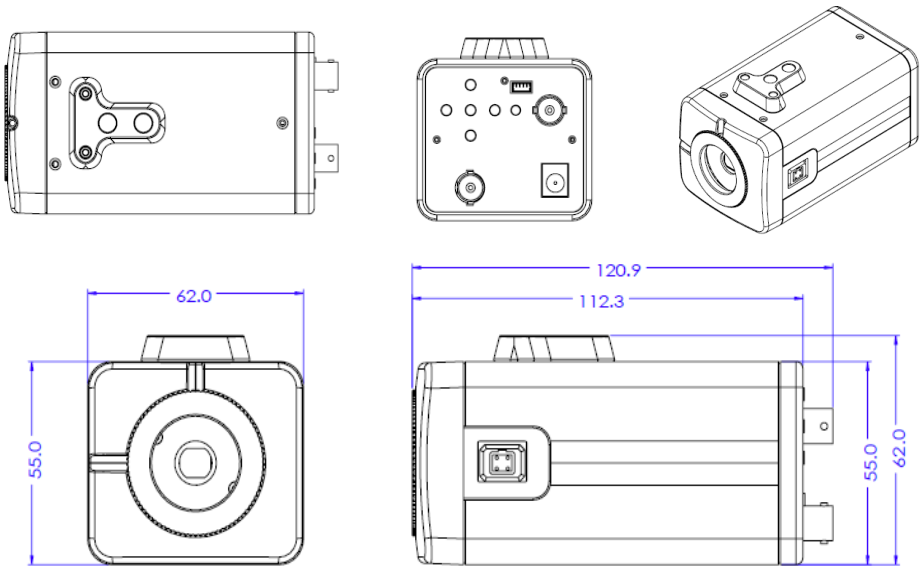
FEATURES

- Sony 1/3" CMOS Sensor
- Highest Resolution (2M Pixels)
- Easy Driven Top / Down OSD Menu
- Reliable TDN5 Mechanism
- SDI Output (1920 x 1080)
- Analogue Video Output
- WDR (Double Shutter)
- 3D-DNR (Digital Noise Reduction)
- Privacy Zone Masking
- Mirror
- D-Zoom
- Shading
- DSS (Digital Slow Shutter)
- RS485

SPECIFICATIONS

Model	CCTV21-MP2301	
Image Sensor	1/3" 2.0M Pixels Color CMOS	
Total Pixels	2016(H) x 1108(V)	
Resolution	1920 x 1080 Pixels 30fps	
Min. illumination	0.5Lux (F1.6, 30IRE) @ Color 0.01Lux (F1.6, 30IRE) @ TDN	
Voltage	DC 12V (10V ~ 14V)	
Power Consumption	Max. 2.2W	
Main Monitor	HD-SDI (1080p)	
Sub Monitor	CVBS	
HD-SDI Transmission	Max. 100m (75ohm Coaxial : 5C-2V)	
Shutter Speed	NTSC : 1/30s	PAL : 1/25s
S/N Ratio	50dB or more (AGC Off)	
Frame Rate	NTSC : 30 fps	PAL : 25 fps
Sync System	Internal	
Operating Temperature	-10℃ to +55℃	
Storage Temperature	-20℃ to +70℃	
External Dimension	62(W) x 55(H) x 120.9(D) mm	

DIMENSION



NK2-MPR2301

1080p HD-SDI Indoor Dome Camera with 1/3" SONY, True Day & Night and WDR

High Definition solution to your business and security

FEATURES

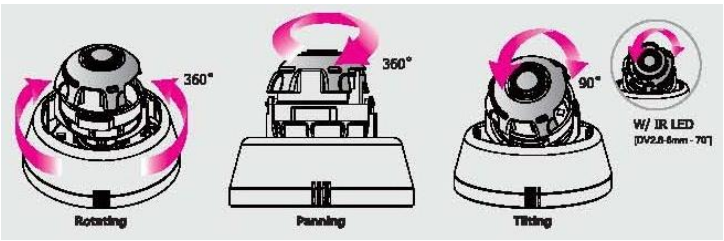
- Sony 1/3" CMOS Sensor
- Highest Resolution (2.0M Pixels)
- Easy Driven Top/Down OSD Menu
- Reliable TDN5 Mechanism
- Auto Focus 3.6 ~ 16mm Lens
- 1920 x 1080p SDI Output
- Analogue Video Output
- WDR (Dual Shutter)
- 3D-DNR (Digital Noise Reduction)
- Privacy Zone Masking
- Mirror
- D-Zoom
- Shading
- DSS (Digital Slow Shutter)
- RS485

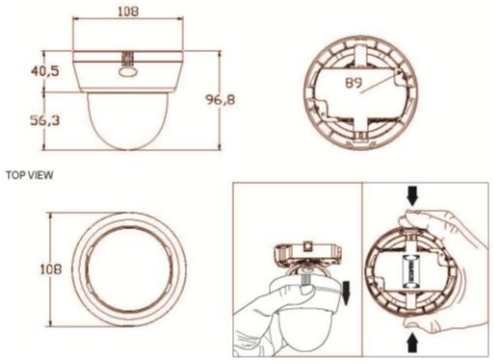
SPECIFICATIONS

Model	NK2-MPR2301
Image Sensor	1/3" 2M Pixels Color CMOS
Total Pixels	2016(H) x 1108(V)
Resolution	1920 x 1080p 30fps
Min. illumination	0.5Lux (F1.6, 30IRE) @ Color 0.01Lux (F1.6, 30IRE) @ TDN
Lens	3.6 ~ 16mm
Voltage	DC 12V (10V ~ 16V) / AC 24V
Power Consumption	Max. 2.2W
Main Monitor	HD-SDI (1080p)
Sub Monitor	CVBS

HD-SDI Transmission	Max. 100m (75ohm Coaxial :5C-2V)	
Shutter Speed	NTSC : 1/30s	PAL : 1/25s
S/N Ratio	50dB or more (AGC Off)	
Frame Rate	NTSC : 30 fps	PAL : 25 fps
Sync System	Internal	
Operating Temperature	-10℃ to +55℃	
Storage Temperature	-20℃ to +70℃	
External Dimension	108(φ) x 96.8(H) mm	

DIMENSIONS





NK4-MPR2301

1080p HD-SDI Vandal Dome Camera with 1/3" Sony, True Day & Night and WDR

High Definition solution to your business and security

FEATURES

- Sony 1/3" CMOS Sensor
- Highest Resolution (2.0M Pixels)
- Easy Driven Top/Down OSD Menu
- Auto Focus 3.6 ~ 16mm Lens
- SDI Output (1920 x 1080p)
- Analogue Video Output
- WDR (Double Shutter)
- 3D-DNR (Digital Noise Reduction)
- Privacy Zone Masking
- Mirror
- D-Zoom
- Shading
- DSS (Digital Slow Shutter)
- RS485
- IP68 Certified

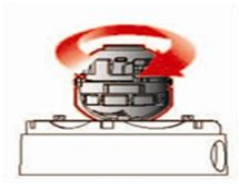
SPECIFICATIONS

Model	NK4-MPR2301
Image Sensor	1/3" 2.0M Pixels Color CMOS
Total Pixels	2016(H) x 1108(V)
Resolution	1920 x 1080 Pixels 30fps
Min. illumination	0.5Lux (F1.6, 30IRE) @ Color 0.01Lux (F1.6, 30IRE) @ TDN
Voltage	DC 12V (10V ~ 14V) / AC 24V
Power Consumption	Max. 2.2W
Main Monitor	HD-SDI (1080p)
Sub Monitor	CVBS
HD-SDI Transmission	Max. 100m (75ohm Coaxial : 5C-2V)

Shutter Speed	NTSC : 1/30s	PAL : 1/50s
S/N Ratio	50dB or more (AGC Off)	
Frame Rate	NTSC : 30 fps	PAL : 25 fps
Sync System	Internal	
Operating Temperature	-10˚C to +55˚C	
Storage Temperature	-20˚C to +70˚C	
External Dimension	φ139(φ) x 118.8(H) mm	

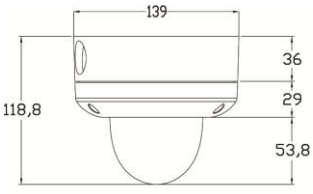
DIMENSIONS

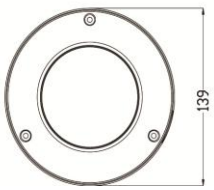
Panning 360°



Ratating 360°

Tilting 90°





PI68-MP2301

1080p HD-SDI IR Bullet Camera with 1/3" Sony, True Day & Night and WDR

FEATURES

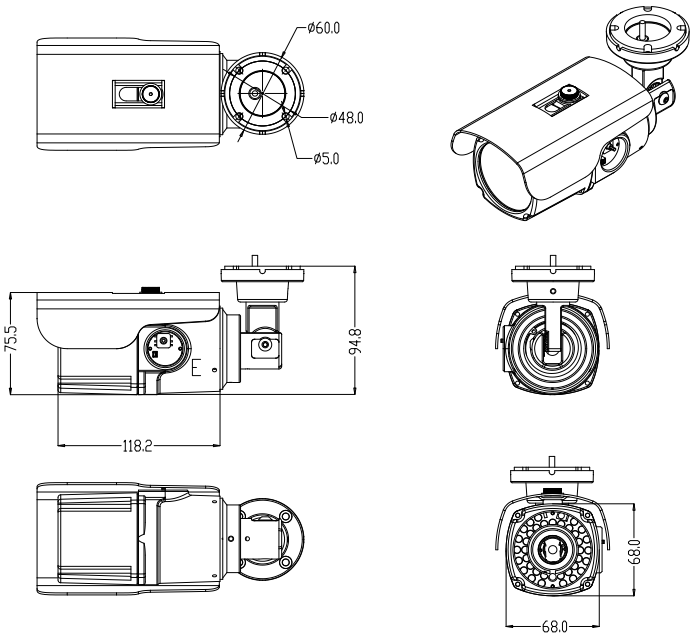
- Panasonic 1/3" CMOS Sensor
- Highest Resolution (2.0M Pixels)
- Easy Driven Top/Down OSD Menu
- Reliable TDN5 Mechanism
- 3.6 ~ 16mm/5-50mm Auto Focus Lens
- SDI Output (1920 x 1080p)
- Analogue Video Output
- WDR (Double Shutter)
- 3D-DNR (Digital Noise Reduction)
- Privacy Zone Masking
- Mirror
- D-Zoom
- Shading
- DSS (Digital Slow Shutter)
- RS485

SPECIFICATIONS

Model	PI68-MP2301
Image Sensor	1/3" 2M Pixels Color CMOS
Total Pixels	2016(H) x 1108(V)
Resolution	1920 x 1080 Pixels 30fps
Min. illumination	0.5Lux (F1.6, 30IRE) @ Color 0.01Lux (F1.6, 30IRE) @ TDN
Voltage	DC 12V (10.0V ~ 16V)
Power Consumption	Max. 2.2W
Main Monitor	HD-SDI (1080p)
Sub Monitor	CVBS

HD-SDI Transmission	Max. 100m (75ohm Coaxial :5C-2V)	
Shutter Speed	NTSC : 1/30s	PAL : 1/25s
S/N Ratio	50dB or more (AGC Off)	
Frame Rate	NTSC : 30fps	PAL : 25fps
Sync System	Internal	
Operating Temperature	-10˚C to +55˚C	
Storage Temperature	-20˚C to +70˚C	
Dimension	68(W) x 94.8(H) X 118.2(D) mm	

DIMENSIONS

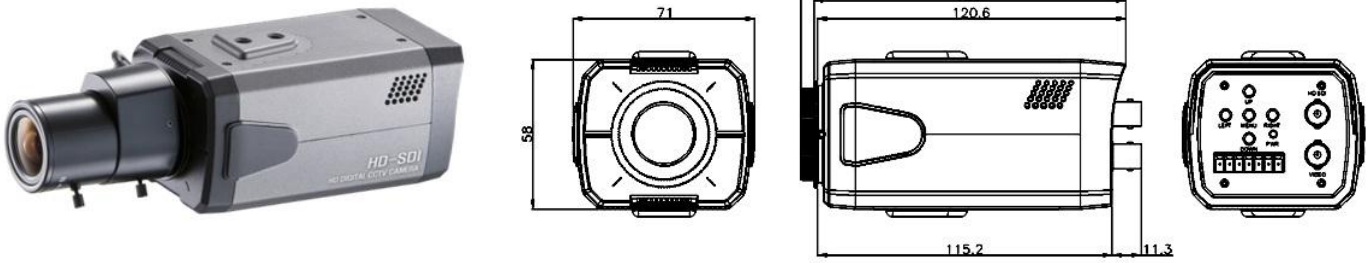


VCS2-E510DM

2.2 Megapixel HD-SDI Camera

Feature

- 1/3" Panasonic 2.2M Progressive Scan CMOS
- HD-SDI : 1080@30p/25p, 720@60p/50p
- True Day & Night with ICR Mechanism
- NTSC, PAL CVBS without WDR
- On Screen Display key
- Wide Dynamic Range compensation
- Adaptive Contrast Enhancer
- Digital Noise Reducer (2D/3D)
- Motion detection / Privacy mask
- RS485 communication
- High Light Masking
- Digital Slow Shutter
- Digital Zoom



Specification

Model		VCS2-E510DM
Camera	Image Device	1/3" Panasonic CMOS
	Scanning System	Progressive Scan
	Total Pixels	2010(H) x 1108(V) : 2.2Mega pixel
	Effective Pixels	1944(H) x 1092(V) : 2.1Mega pixel
	Lens Mount	C/CS
	Day & Night System	ICR (Mechanism Filter Mountable)
	Min. Illumination	0.1lux @ F1.4, 30IRE
	Sync System	Internal
	Electronic Shutter	60Hz : 1/30 ~ 1/30,000sec, 50Hz : 1/25 ~ 1/30,000sec
Video	Output 1	HD-SDI
	Output 2	CVBS (NTSC, PAL) without WDR
	Resolution& frame rate	1080@30p/25p, 720@60p/50p
OSD	On Screen Display	Built-in
	Language	English
LENS		DC / MANUAL
EXPOSURE	BRIGHTNESS	0 ~ 20
	AGC	0 ~ 20
	SHUTTER MODE	AUTO / MANUAL
	SHUTTER SPEED	1/30(25), 60(50), 120(100), 250, 700, 1K, 1.6K, 5K, 7K, 10K, 30K
	SENS-UP	OFF / X2 / X3 / X4
WHITE BALANCE	MODE	AUTO / PUSH LOCK / MANUAL
	MANUAL MODE	COLOR TEMP. / RED GAIN / BLUE GAIN
WDR / BLC / ACE	MODE	OFF / WDR / BLC / ACE
	BLC POS X, Y	0 ~ 20
	BLC SIZE X, Y	0 ~ 20

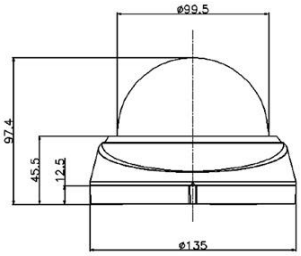
DNR		OFF / LOW / MIDDLE / HIGH
DAY & NIGHT	MODE	AUTO / EXT / COLOR / B & W
	DWELL TIME	1 ~ 10sec
	D → N LEVEL	0 ~ 20
	N → D LEVEL	0 ~ 20
IMAGE	SHARPNESS	0 ~ 20
	COLOR LEVEL	0 ~ 20
	MIRROR	OFF / ON
	FLIP	OFF / ON
	LENS SHADING	OFF / ON
	D-ZOOM	1 ~ 40X
SPECIAL	COMM ADJUST	CAM ID / BAUD RATE / 485 TERM.
	PRIVACY	OFF / ON (position, size, color adjustable)
	HLM	OFF / ON (level, color adjustable)
	MOTION	OFF / ON (sensitivity adjustable)
SYSTEM	SDI FORMAT	1080P / 720P
	SDI FPS	30/25 @ 1080p, 60/50 @ 720p
	FREQ (NT/PAL)	60Hz(NTSC) / 50Hz(PAL)
	CVBS SCALE	FULL / CUT
	CVBS OUT	OFF / ON
	Operating Temperature	14°F~122°F (-10°C~+50°C)
	Storage Temperature	-4°F~140°F (-20°C~+60°C)
	Humidity	Less than 80%
	Power Consumption	DC12V(±10%), Max.200mA (Option : Dual Power)
	Dimension	71(W) x 58(H) x 127(D) mm / 2.80(W) x 2.28(H) x 5.00(D) inch
	Weight	Approx. 220g / 0.485lb

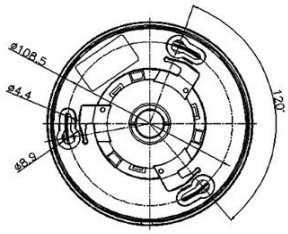
VCD6-V510DM-IR

2.2 Megapixel HD-SDI Camera

Feature

- 1/3" Panasonic 2.2M Progressive Scan CMOS
- HD-SDI : 1080@30p/25p, 720@60p/50p
- True Day & Night with ICR Mechanism
- f=2.8~11mm ICR Vari-foacl Lens
- NTSC, PAL CVBS without WDR
- 30 IREDs
- On Screen Display key
- Wide Dynamic Range compensation
- Adaptive Contrast Enhancer
- Digital Noise Reducer (2D/3D)
- Motion detection / Privacy mask
- RS485 communication
- High Light Masking
- Digital Slow Shutter
- Digital Zoom (1X~40X)





Specification

Model		VCD6-V510DM-IR
Camera	Image Device	1/3" Panasonic CMOS
	Scanning System	Progressive Scan
	Total Pixels	2010(H) x 1108(V) : 2.2Mega pixel
	Effective Pixels	1944(H) x 1092(V) : 2.1Mega pixel
	Day & Night System	ICR (Mechanism Filter Mountable)
	Min. Illumination	0.1lux @ F1.4, 30IRE
	Sync System	Internal
	Electronic Shutter	60Hz : 1/30 ~ 1/30,000sec, 50Hz : 1/25 ~ 1/30,000sec
Video	Output 1	HD-SDI
	Output 2	CVBS (NTSC, PAL) without WDR
	Resolution& frame rate	1080@30p/25p, 720@60p/50p
OSD	On Screen Display	Built-in
	Language	English
LENS		DC IRIS f=2.8~11mm ICR (indoor, outdoor selectable) / MANUAL
EXPOSURE	BRIGHTNESS	0 ~ 20
	AGC	0 ~ 20
	SHUTTER MODE	AUTO / MANUAL
	SHUTTER SPEED	1/30(25), 60(50), 120(100), 250, 700, 1K, 1.6K, 5K, 7K, 10K, 30K
	SENS-UP	OFF / X2 / X3 / X4
WHITE BALANCE	MODE	AUTO / PUSH LOCK / MANUAL
	MANUAL MODE	COLOR TEMP. / RED GAIN / BLUE GAIN
WDR / BLC / ACE	MODE	OFF / WDR / BLC / ACE
	BLC POS X, Y	0 ~ 20
	BLC SIZE X, Y	0 ~ 20

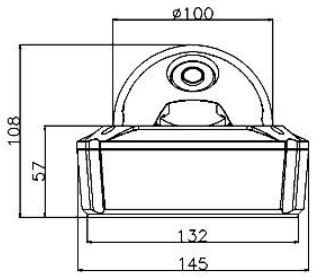
DNR		OFF / LOW / MIDDLE / HIGH
IMAGE	SHARPNESS	0 ~ 20
	COLOR LEVEL	0 ~ 20
	MIRROR	OFF / ON
	FLIP	OFF / ON
	LENS SHADING	OFF / ON
	D-ZOOM	1 ~ 40X
SPECIAL	COMM ADJUST	CAM ID / BAUD RATE / 485 TERM.
	PRIVACY	OFF / ON (position, size, color adjustable)
	HLM	OFF / ON (level, color adjustable)
	MOTION	OFF / ON (sensitivity adjustable)
SYSTEM	SDI FORMAT	1080P / 720P
	SDI FPS	30/25 @ 1080p, 60/50 @ 720p
	FREQ (NT/PAL)	60Hz(NTSC) / 50Hz(PAL)
	CVBS SCALE	FULL / CUT
	CVBS OUT	OFF / ON
Others	Infrared Wavelength & Luminary	850nm & IR (30 pieces)
	Operating Temperature	14°F~122°F (-10°C~+50°C)
	Storage Temperature	-4°F~140°F (-20°C~+60°C)
	Humidity	Less than 80%
	Power Consumption	IR OFF : DC12V(±10%), Max.200mA (Dual Power : DC12V, Max.270mA / AC24V, Max 3.6W) IR ON : DC12V(±10%), Max.400mA (Dual Power : DC12V, Max 550mA / AC24V, Max 8.5W)

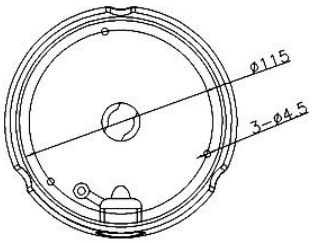
VCV5-V510DM-IR

2.2 Megapixel HD-SDI Camera

Feature

- 1/3" Panasonic 2.2M Progressive Scan CMOS
- HD-SDI : 1080@30p/25p, 720@60p/50p
- True Day & Night with ICR Mechanism
- f=2.8~11mm ICR Vari-foacl Lens
- NTSC, PAL CVBS without WDR
- 30 IREDs
- On Screen Display key
- Wide Dynamic Range compensation
- Adaptive Contrast Enhancer
- Digital Noise Reducer (2D/3D)
- Motion detection / Privacy mask
- RS485 communication
- High Light Masking
- Digital Slow Shutter
- Digital Zoom (1X ~ 40X)





Specification

Model		VCV5-V510DM-IR
Camera	Image Device	1/3" Panasonic CMOS
	Scanning System	Progressive Scan
	Total Pixels	2010(H) x 1108(V) : 2.2Mega pixel
	Effective Pixels	1944(H) x 1092(V) : 2.1Mega pixel
	Day & Night System	ICR (Mechanism Filter Mountable)
	Min. Illumination	0.1lux @ F1.4, 30IRE
	Sync System	Internal
	Electronic Shutter	60Hz : 1/30 ~ 1/30,000sec, 50Hz : 1/25 ~ 1/30,000sec
Video	Output 1	HD-SDI
	Output 2	CVBS (NTSC, PAL) without WDR
	Resolution& frame rate	1080@30p/25p, 720@60p/50p
OSD	On Screen Display	Built-in
	Language	English
LENS		DC IRIS f=2.8 ~ 11mm ICR (indoor, outdoor selectable) / MANUAL
EXPOSURE	BRIGHTNESS	0 ~ 20
	AGC	0 ~ 20
	SHUTTER MODE	AUTO / MANUAL
	SHUTTER SPEED	1/30(25), 60(50), 120(100), 250, 700, 1K, 1.6K, 5K, 7K, 10K, 30K
	SENS-UP	OFF / X2 / X3 / X4
WHITE BALANCE	MODE	AUTO / PUSH LOCK / MANUAL
	MANUAL MODE	COLOR TEMP. / RED GAIN / BLUE GAIN
WDR / BLC / ACE	MODE	OFF / WDR / BLC / ACE
	BLC POS X, Y	0 ~ 20
	BLC SIZE X, Y	0 ~ 20

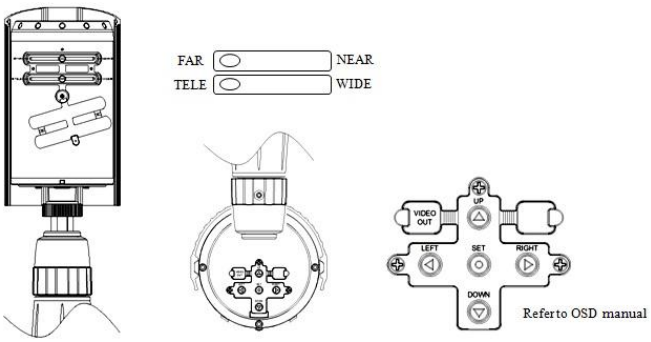
DNR		OFF / LOW / MIDDLE / HIGH
IMAGE	SHARPNESS	0 ~ 20
	COLOR LEVEL	0 ~ 20
	MIRROR	OFF / ON
	FLIP	OFF / ON
	LENS SHADING	OFF / ON
	D-ZOOM	1 ~ 40X
SPECIAL	COMM ADJUST	CAM ID / BAUD RATE / 485 TERM.
	PRIVACY	OFF / ON (position, size, color adjustable)
	HLM	OFF / ON (level, color adjustable)
	MOTION	OFF / ON (sensitivity adjustable)
SYSTEM	SDI FORMAT	1080P / 720P
	SDI FPS	30/25 @ 1080p, 60/50 @ 720p
	FREQ (NT/PAL)	60Hz(NTSC) / 50Hz(PAL)
	CVBS SCALE	FULL / CUT
	CVBS OUT	OFF / ON
OTHER	Infrared Wavelength & Luminary	850nm & IR (30 pieces)
	Operating Temperature	14°F~122°F (-10°C~+50°C)
	Storage Temperature	-4°F~140°F (-20°C~+60°C)
	Humidity	Less than 80%
	Power Consumption	IR OFF : DC12V(±10%), Max.200mA (Dual Power : DC12V, Max.270mA / AC24V, Max 3.6W) IR ON : DC12V(±10%), Max.400mA (Dual Power : DC12V, Max 550mA / AC24V, Max 8.5W)

VCN-V510DM-IR

2.2 Megapixel HD-SDI Camera

Feature

- 1/3" Panasonic 2.2M Progressive Scan CMOS
- HD-SDI : 1080@30p/25p, 720@60p/50p
- True Day & Night with ICR Mechanism
- f=2.8~11mm ICR Vari-foacl Lens
- NTSC, PAL CVBS without WDR
- 44 IREDs
- On Screen Display key
- Wide Dynamic Range compensation
- Adaptive Contrast Enhancer
- Digital Noise Reducer (2D/3D)
- Motion detection / Privacy mask
- RS485 communication
- High Light Masking
- Digital Slow Shutter
- Digital Zoom (1X~40X)



Specification

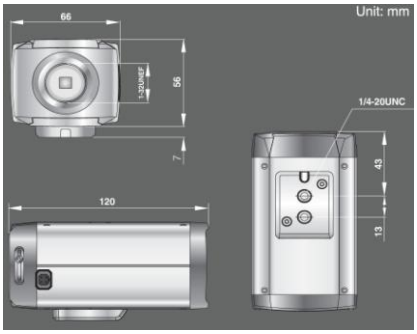
Model		VCN-V510DM-IR
Camera	Image Device	1/3" Panasonic CMOS
	Scanning System	Progressive Scan
	Total Pixels	2010(H) x 1108(V) : 2.2Mega pixel
	Effective Pixels	1944(H) x 1092(V) : 2.1Mega pixel
	Day & Night System	ICR (Mechanism Filter Mountable)
	Min. Illumination	0.1lux @ F1.4, 30IRE
	Sync System	Internal
	Electronic Shutter	60Hz : 1/30 ~ 1/30,000sec, 50Hz : 1/25 ~ 1/30,000sec
Video	Output 1	HD-SDI
	Output 2	CVBS (NTSC, PAL) without WDR
	Resolution& frame rate	1080@30p/25p, 720@60p/50p
OSD	On Screen Display	Built-in
	Language	English
LENS		DC (indoor, outdoor selectable) / MANUAL
EXPOSURE	BRIGHTNESS	0 ~ 20
	AGC	0 ~ 20
	SHUTTER MODE	AUTO / MANUAL
	SHUTTER SPEED	1/30(25), 60(50), 120(100), 250, 700, 1K, 1.6K, 5K, 7K, 10K, 30K
	SENS-UP	OFF / X2 / X3 / X4
WHITE BALANCE	MODE	AUTO / PUSH LOCK / MANUAL
	MANUAL MODE	COLOR TEMP. / RED GAIN / BLUE GAIN
WDR / BLC / ACE	MODE	OFF / WDR / BLC / ACE
	BLC POS X, Y	0 ~ 20
	BLC SIZE X, Y	0 ~ 20
DNR		OFF / LOW / MIDDLE / HIGH
DAY & NIGHT	MODE	AUTO / COLOR / B & W

	DWELL TIME	1 ~ 10sec
	D → N LEVEL	0 ~ 20
	N → D LEVEL	0 ~ 20
IMAGE	SHARPNESS	0 ~ 20
	COLOR LEVEL	0 ~ 20
	MIRROR	OFF / ON
	FLIP	OFF / ON
	LENS SHADING	OFF / ON
	D-ZOOM	1 ~ 40X
SPECIAL	COMM ADJUST	CAM ID / BAUD RATE / 485 TERM.
	PRIVACY	OFF / ON (position, size, color adjustable)
	HLM	OFF / ON (level, color adjustable)
	MOTION	OFF / ON (sensitivity adjustable)
SYSTEM	SDI FORMAT	1080P / 720P
	SDI FPS	30/25 @ 1080p, 60/50 @ 720p
	FREQ (NT/PAL)	60Hz(NTSC) / 50Hz(PAL)
	CVBS SCALE	FULL / CUT
	CVBS OUT	OFF / ON
Others	Infrared Wavelength & Luminary	850nm & IR (40 pieces) / SR (10 pieces)
	Operating Temperature	14°F~122°F (-10℃~+50℃)
	Storage Temperature	-4°F~140°F (-20℃~+60℃)
	Humidity	Less than 80%
	Power Consumption	IR OFF : DC12V(±10%), Max.200mA (Dual Power : DC12V, Max.270mA / AC24V, Max 3.6W) IR ON : DC12V(±10%), Max.630mA (Dual Power : DC12V, Max 800mA / AC24V, Max 12W)
	Lens Option	Lens (f=2.8 ~ 11mm, 4 ~ 9mm, 3.6 ~ 16mm)

HSB-E122W *Full HD-SDI HDcctv CAMERA*

FEATURES *Full HD (1920 x 1080p) Real Time Advanced Technology for Surveillance*

- 3D-Digital Noise Reduction
- Digital Slow Shutter
- Digital Zoom
- Removable IR Cut Filter for Day & Night
- ACE (D-WDR)
- Privacy Zone Masking
- Video Motion Detection
- Defog
- SMPTE-292M / 75 Ohm BNC



SPECIFICATION

Model		HSB-E122W
General		
Image Sensor		1/2.9" 2M Sony CMOS
Total Pixels		2000(H) x 1241(V)
Active Pixels		1920(H) x 1080(V)
Scanning System		Progressive
Sync. System		Internal
Resolution		Digital : 1920x1080p (1080p/30fps), 1280x720p / Analog : 700TVL
Min. illumination		1.0lux (Color), 0.5lux (BW)
Video Output		HD-SDI, CVBS Analog : NTSC, PAL (without WDR)
S/N Ratio		More than 50bB (AGC off)
Camera Control		OSD (Joystick Switch)
IR LED		–
Function		
Lens		DC / MANUAL
WDR / BLC / HLC		OFF / WDR / BLC / HLC (High Light Compensation)
Shutter		AUTO, 1/30(1/25), 1/60 ~ 1/60,000sec
Brightness		0 ~ 20
AGC		0 ~ 10
Digital Slow Shutter		OFF / x2 / x3 / x4
White Balance		AUTO / AUTOext / PRESET / MANUAL
ACE		OFF / ON
DEFOG		OFF / LOW / MIDDLE / HIGH
Day & Night		AUTO / COLOR / BW / EXT
D & N AUTO	D → N Level	0 ~ 255
	N → D Level	0 ~ 255
	Delay	1 ~ 60sec
SPECIAL	Shading	OFF / ON
	Motion Detection	OFF / ON
	Privacy Masking	OFF / ON (24 zone)
	DNR	OFF / LOW / MIDDLE / HIGH

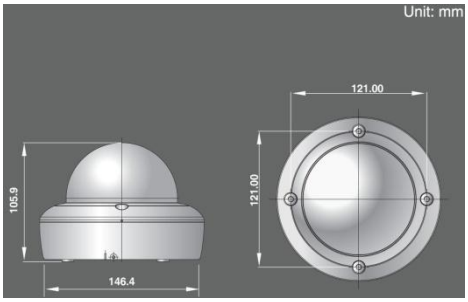
	Effect	OFF / MIRROR / FLIP / ROTATE
	D-ZOOM	0 ~ 96
	Freeze	OFF / ON
	Sharpness	0 ~ 10
	Croma	0 ~ 20
	Shading Detection	OFF / ON
	Defect Detection	OFF / ON
	Camera ID	1 ~ 255
	Protocol	Fastrax / Pelco-P / Pelco-D
	Baud rate	2400 / 4800 / 9600 / 19200
	OSD control Coax	–
	Dout Format	1080p / 720p
	Video mode	NTSC (60Hz) / PAL (50Hz)
	Camera Title	OFF / ON
	Camera ID Title	OFF / ON
	Language	ENGLISH
Reset		FACTORY RESET / RETURN
Exit		Save Yes / Save No
Power		
Power Source		AC 24V ± 10% / DC 12V ± 10%
Power Consumption		Max 2.5 W (200mA)
Connector & ETC		
Power input		Power Cord (BSI)
HD-SDI output		BNC Connector
CVBS output		BNC Connector
Auto Iris Output		4-pin mini din jack (Standard connection)
Lens mount		C/CS mount (Selected through back focus)
Mounting Hole		1/4" – 20 UNC (top or bottom)
Operating temperature		14˚F ~ 122˚F (-10˚C ~ +50˚C)
Operating humidity		0 ~ 96% (non-condensing)
External dimension		66(W) x 56(H) x 120(D) mm
Weight		270g

DK SOLUTIONS
www.dk2you.com , gogocctv@dksolutions.co.kr

HSG-E122F *Full HD-SDI HDcctv CAMERA*

FEATURES *Full HD (1920 x 1080p) Real Time Advanced Technology for Surveillance*

- 3D-Digital Noise Reduction
- Digital Slow Shutter
- Digital Zoom
- Removable IR Cut Filter for Day & Night
- ACE (D-WDR)
- Privacy Zone Masking
- Video Motion Detection
- Defog
- Smart IR (30 IR LED)
- SMPTE-292M / 75 Ohm BNC
- IP66



SPECIFICATION

Model		HSG-E122F
General		
Image Sensor		1/2.9" 2M Sony CMOS
Total Pixels		2000(H) x 1241(V)
Active Pixels		1920(H) x 1080(V)
Scanning System		Progressive
Sync. System		Internal
Resolution		Digital : 1920x1080p (1080p/30fps), 1280x720p / Analog : 700TVL
Min. illumination		1.0lux (Color), 0.5lux (BW)
Video Output		HD-SDI, CVBS Analog : NTSC, PAL (without WDR)
S/N Ratio		More than 50bB (AGC off)
Camera Control		OSD (Joystick Switch)
IR LED		30EA
Function		
Lens		DC / MANUAL
WDR / BLC / HLC		OFF / WDR / BLC / HLC (High Light Compensation)
Shutter		AUTO, 1/30(1/25), 1/60 ~ 1/60,000sec
Brightness		0 ~ 20
AGC		0 ~ 10
Digital Slow Shutter		OFF / x2 / x3 / x4
White Balance		AUTO / AUTOext / PRESET / MANUAL
ACE		OFF / ON
DEFOG		OFF / LOW / MIDDLE / HIGH
Day & Night		AUTO / COLOR / BW / EXT
D & N AUTO	D → N Level	0 ~ 255
	N → D Level	0 ~ 255
	Delay	1 ~ 60sec
SPECIAL	Shading	OFF / ON
	Motion Detection	OFF / ON
	Privacy Masking	OFF / ON (24 zone)
	DNR	OFF / LOW / MIDDLE / HIGH

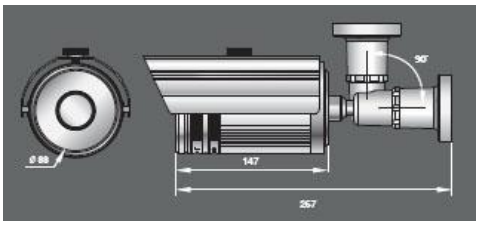
	Effect	OFF / MIRROR / FLIP / ROTATE
	D-ZOOM	0 ~ 96
	Freeze	OFF / ON
	Sharpness	0 ~ 10
	Croma	0 ~ 20
	Shading Detection	OFF / ON
	Defect Detection	OFF / ON
	Camera ID	1 ~ 255
	Protocol	Fastrax / Pelco-P / Pelco-D
	Baud rate	2400 / 4800 / 9600 / 19200
	OSD control Coax	–
	Dout Format	1080p / 720p
	Video mode	NTSC (60Hz) / PAL (50Hz)
	Camera Title	OFF / ON
	Camera ID Title	OFF / ON
	Language	ENGLISH
Reset		FACTORY RESET / RETURN
Exit		Save Yes / Save No
Power		
Power Source		AC 24V ± 10% / DC 12V ± 10%
Power Consumption		Max 2.5 W (150mA)
Connector & ETC		
Power input		2-Pin Wire
HD-SDI output		BNC Connector
CVBS output		BNC Connector
Auto Iris Output		Fixed mount
Lens mount		f=2.8 ~ 10mm F1.2 ~ 360 Varifocal, ICR (D&N)
Mounting Hole		–
Operating temperature		14˚F ~ 122˚F (-10˚C ~ +50˚C)
Operating humidity		0 ~ 96% (non-condensing)
External dimension		146.4ϕ x 105.9(H) mm
Weight		700g

DK SOLUTIONS
www.dk2you.com , gogocctv@dksolutions.co.kr

HSUI-H75DxE3U8 *FULL HD : HDCCTV IR Bullet Camera*

Feature *Full HD (1920x1080p) Real Time Advanced Technology for Surveillance*

- 3D-Digital Noise Reduction
- Digital Slow Shutter
- Digital Zoom
- Removable IR Cut Filter for Day & Night
- ACE
- Privacy Zone Masking
- Video Motion Detection
- Defog
- Smart IR (72 IR LED)
- 3.5 ~ 16mm Motorized Lens
- SMPTE-292M / 75 Ohm BNC
- IP66



Specification

Model		HSUI-H75DxE3U8
POWER		
Power Source		AC24V / DC12V ± 10%
Power Consumption		Max 9.5 W (800mA)
GENERAL		
Image Sensor		1/2.9" 2.1M Sony CMOS
Total Pixels		2000(H) x 1241(V)
Active Pixels		1920(H) x 1080(V)
Scanning System		Progressive
Sync. System		Internal
Resolution		Digital : 1920 x 1080p (1080p/30fps), 1280 x 720p, Analog : 700TVL
Min. Illumination		1.0Lux (COLOR), 0Lux (BW, IR LED ON)
Video Output		HD-SDI (with WDR), CVBS Analog : NTSC, PAL (without WDR)
IR	IR LED	72ea IR LED (850nm)
	Distance	50M
S/N Ratio		More than 50dB (AGC off)
Camera Control		OSD (Joystick Switch)
FUNCTION		
Lens		DC / MANUAL
WDR/BLC/HLC		OFF / WDR / BLC / HLC (High Light Compensation)
Shutter		AUTO, 1/30(1/25), 1/60 ~ 1/60,000sec
Brightness		0 ~ 20
AGC		0 ~ 7
DSS (Digital Slow Shutter)		OFF / x2 / x3 / x4
White Balance		AUTO / AUTO ext / PRESET / MANUAL
ACE		OFF / ON
DEFOG		OFF / LOW / MIDDLE / HIGH
Day & Night		AUTO / COLOR / BW / EXT
D & N Auto	D → N Level	0 ~ 255
	N → D Level	0 ~ 255
	Delay	1 ~ 60sec
	Smart IR Level	1 ~ 20
SPECIAL	Shading	OFF / ON
	Motion	OFF / ON

	Detection	
	Privacy Masking	OFF / ON (24 zone)
	DNR	OFF / LOW / MIDDLE / HIGH
	Effect	OFF / MIRROR / FLIP / ROTATE
	D-ZOOM	0 ~ 120
	Still	OFF / ON
	Sharpness	0 ~ 10
	Croma	0 ~ 20
	Gamma	0 ~ 4
	Shading Detection	OFF / ON
	Defect Detection	OFF / ON
	Dout Format	1080P / 720P
	Video mode	NTSC (60Hz) / PAL (50Hz)
	Camera Title	OFF / ON
	Language	ENGLISH / CHINESE
RS485	ID	1 ~ 255
	Protocol	Fastrax / Pelco-P / Pelco-D
	Baudrate	2400 / 4800 / 9600 / 19200 / 38400
Reset		RESET
Exit		Save Yes / Save No
CONNECTOR & ETC		
Power input		2P WIRE
HD-SDI output		BNC Connector
CVBS output		BNC Connector
Lens mount		Fixed mount
Lens		Motorized, f = 3.5 ~ 16mm F1.2 ~ 360 Varifocal, ICR (D & N)
Operating temperature		14℉ ~ 122℉ (-10℃ ~ +50℃)
Operating humidity		0 ~ 96% (non-condensing)
External dimension		Φ88 x 267 mm
Weight		1.4kg
Ingress Protection		IP66

HSG-G122

1080p HD-SDI Vandal Dome Camera with WDR, DIS and True Day & Night

High Definition solution to your business and security

FEATURES

- Full HD (1920x1080P) Real Time (30fps)
- WDR
- 3D-DNR
- DIS (Digital image Stabilization)
- DSS (Digital Slow Shutter)
- X20 Digital Zoom
- HSBLC (Highlight Suppression BLC)
- BLC
- Privacy Zone Masking
- Removable IR Cut filter for Day & Night
- Auto Exposure (AE)
- Auto White Balance (AWB)
- Single 75ohm coaxial bi-directional RS-485 interface
- MPTE-292M / 75Ohm BNC
- IP66

SPECIFICATIONS

Model	HSG-G122
Image Sensor	1/2.8" CMOS
Total Pixel	2M
Effective Pixel	1920(H) x 1080(V)
Scanning System	Progressive
Lens	Megapixel 3-9mm Variable Focal Lens
Min. illumination	1.0lux (F1.2, 30IRE, AGC On, 0.1ix DSS On)
AE/AWB	Yes
DNR	3D-DNR
Day & Night	True D&N(IR-cut filter)
WDR	Yes
DIS	Yes
BLC	Yes
OUT Resolution	1920x1080p @ 30fps
SDI(Out)	HD-SDI, SMPTE-292M / 75ohm

	BNC
D&N(In)	1
Alarm(Out)	1
485(Out)	Single 75ohm coaxial bi-directional RS485 interface
Motion Detection	Yes
Privacy Masking	Yes
Digital Zoom	X20
Control Signal in the Coax	Yes
Lens Correction	Yes
Power	DC12V, AC24V
Power Consumption	DC12V Max 3.6W
Operation Temp.	-10°C to 50°C
Approvals	FCC, CE, (UL)

DK SOLUTIONS
www.dk2you.com / gogocctv@dksolutions.co.kr

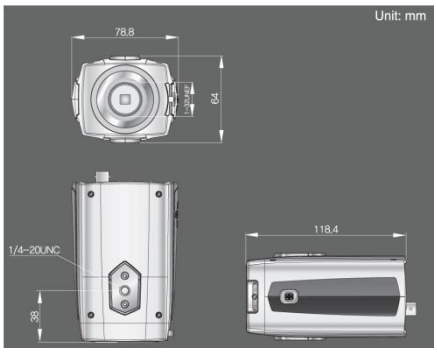
HSB-G122

1080p HD-SDI Box Camera with WDR, DIS and True Day & Night

High Definition solution to your business and security

FEATURES

- Full HD (1920 x 1080p) Real Time (30fps)
- WDR (Wide Dynamic Range)
- 3D-DNR (Digital Noise Reduction)
- DIS (Digital Image Stabilization)
- DSS (Digital Slow Shutter)
- x20 Digital Zoom
- BLC (Back Light Compensation)
- HSBLC (Highlight Suppression BLC)
- Privacy Zone Masking
- Removable IR Cut Filter for Day & Night
- Auto Exposure (AE)
- Auto White Balance (AWB)
- Single 75Ω coaxial bi-directional RS 485 interface
- SMPTE-292M / 75 Ohm BNC



SPECIFICATIONS

Model	HSB-G122
Image Sensor	1/2.8" CMOS
Total Pixel	2M
Effective Pixel	1920(H) x 1080(V)
Scanning System	Progressive
Lens	Optional
Lens Mount	C/CS
Min. Illumination	1.0Lux (F1.2, 30IRE, AGC On, 0.1xDSS On)
AE/AWB	Yes
DNR	3DNR
D&N	True D&N (IR-cut filter)
WDR	Yes
DIS	Yes
BLC	Yes
OUT Resolution	1920x1080p @ 30fps
SDI(Out)	HD-SDI, SMPTE-292M / 75 Ohm BNC
Composite(Out)	1V p-p, NTSC, PAL / 75 Ohm

	BNC
D&N(In)	1
Alarm(Out)	1
485(Out)	Single 75Ω coaxial bi-directional RS 485 interface
Motion Detection	Yes
Privacy Masking	Yes
Digital ZOOM	20x
DC Iris	Yes
Control Signal in the Coax	Yes
Lens Correction	Yes
Power	DC 12V, AC 24V
Power Consumption	DC 12V Max 3.6W
Operating Temperature	-10℃ to +50℃
External Dimension	66(W) x 56(H) x 120(D)mm / Weight : 280g
Approvals	FCC, CE, (UL)

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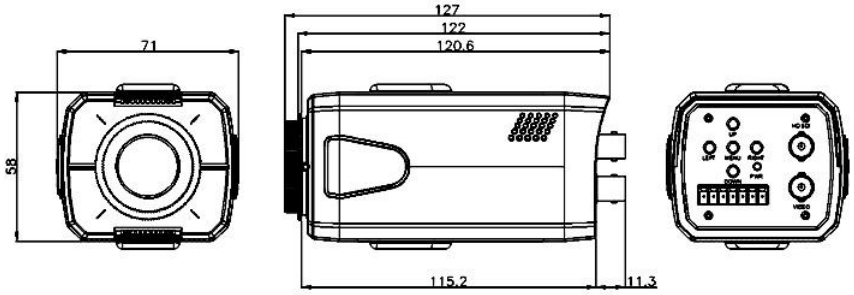
VCS2-E130SD

1/3" SONY 1.3M Progressive Scan Image Sensor HD-SDI Camera

Feature

- 1/3" Sony 1.3M Progressive Scan CCD Image Sensor
- 1.3M Pixels (650TV Lines)
- Megapixel C/CS Lens Required
- ICR Mechanism Filter Mountable
- DSS (Digital Slow shutter) Supported
- HD-SDI Video Out Supporting standard SMPTE protocol
- Excellent Video Quality of 720p Video Resolution at 30fps
- 1 CH. Audio In/Out (Mic-In / Audio-Out)
- Service Analog Composite Video Output



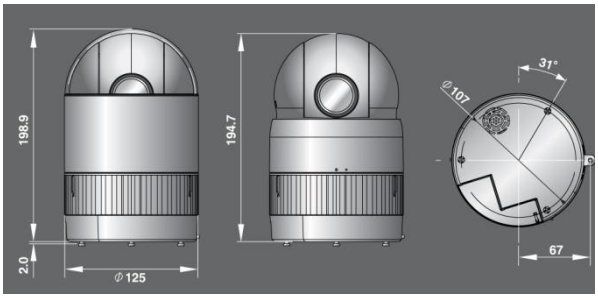
Specification

Model		VCS2-E130SD
Camera	Image Device	1/3" SONY 1.3M Pixel CCD
	Scanning System	Progressive Scan
	Lens Iris	DC Iris (Auto)
	Min. Illuminance	1.0Lux (AGC On), 0.4Lux (DSS On)
	Shutter speed (Auto)	1/30 ~ 1/100,000sec
	Slow Shutter	ON / OFF
	Shutter	Auto / Manual
	Shutter speed (Manual)	1/30 ~ 1/2,000sec Selectable
	Backlight Function	ON / OFF
	Brightness	Adjustable
	Max. AGC Gain	Adjustable
	Day & Night	ON / OFF
	AWV Mode	ARW Mode / PUSH Mode / Manual
	R Gain	Adjustable
	B Gain	Adjustable
	Signal Process	Digital Signal Process
Video	Quantization Processing	12 bit
	S/N Ration	More than 50dB
	Output 1	HD-SDI (720p - SMPTE 292/296M)
	Output 2	Composite Video (1 Vp-p, 75 Ohm, BNC, NTSC/PAL)
Audio	Algorithm	G.711u
	Sample Rate	8kHz
	Bit rate	64kbps
	Input	Mic-In (Mono) : 1EA
	Output	Audio-Out (Mono) : 1EA
PTZ Control	Port	RS485 / RS232
	Baud Rate	2,400bps ~ 115,200bps Selectable
Sensor	Sensor Input	Normally Open
	Alarm Output	Normally Open, Relay 30Vdc/1A
Others	Dimension	71(W) x 58(H) x 127(L)mm
	Weight	550g (Without a Bracket or a Lens)
	Power	DC12V, 0.5A
	Operation Temperature	-10℃ to 50℃
Option		True Day & Night Mechanism

HSF3S20D2N(P)A2 *20x Full HD : HDCCTV Speed Dome Camera*

Feature

- 20x Auto Focus Zoom Lens
- 2.0 MP Resolution Supported (1920 x 1080)
- WDR Supported
- DNR (Digital Noise Reduction)
- Day & Night (IR Cut Filter)
- BLC (Back Light Compensation)
- Auto Explosure
- Auto White Balance
- Motion Detection
- 360° Continuous Rotation
- 180° Digital Flip
- 240 Preset position (Individual AE & AF)
- 1 Auto pan and 16 Auto Scan (Endless Panning)
- 8 Tours, 8 Patterns to 500 Seconds
- 12 Privacy Masking
- 16 Area Title
- Auto Calibration (0.1° ~ 6°)
- 4 Alarm input, 2 Alarm output
- 1 HD-SDI and 1 Composite output
- Single cable Solution (video & control)



Specification

Model	HSF3S20D2N(P)A2	
IMAGE		
Image Sensor	1/3"CMOS	
Lens	Optical Zoom 20x (f=4.7mm ~ 94mm) F1.6(wide) ~ F3.5(tele)	
Scanning Mode	Progressive Scan	
Min. Illumination	Color : 0.5Lux, B/W : 0.005Lux (F1.6, 50IRE)	
Focus	Auto / Manual / One Push / Constant Manual	
White Balance	ATW / Manual / Outdoor Auto / Sodium Auto / Sodium	
Auto Exposure	Auto / Manual / Iris PRIO / Shutter PRIO / Bright	
D & N	True D & N (IR Cut Filter)	
WDR	Yes	
BLC	Yes	
VIDEO		
Video Out	Composite	1Vp-p, NTSC, PAL / 75 ohm BNC
	HD-SDI	SMPTE-292M / 75 ohm BNC
Resolution Supported	1080p, 720p	
Frame Rate	1920 x 1080 @ 30fps, @ 25fps	
S/N Ratio	More than 50dB	
IN / OUT		
Alarm In/Out	In x 4 / Out x 2	
Communication	RS485	

Protocol	F2, F2E, Pelco-P, Pelco-D	
Baud Rate	2400 ~ 38.4Kbps	
FEATURE		
Pan Range	360° Endless	
Pan Speed	Preset	380°/sec
	Manual	Maximum 380°/sec (Turbo)
Tilt Range	-10 ~ 190° (Digital Flip)	
Tilt Speed	Preset	380°/sec
	Manual	Maximum 380°/sec (Turbo)
Preset Position	240	
Auto Scan	1 Auto Pan & 16 Auto Scan	
Tour	8	
Pattern	8	
Privacy Masking	12	
Motion Detection	Yes	
MISCELLANEOUS		
Weatherproof	No	
Power	DC12V, AC24V	
Power Consumption	Max. 17W	
Operating Temperature	0℃ ~ 50℃	
Humidity	0 ~ 90% RH	
External Dimension	Φ125 x 201mm	

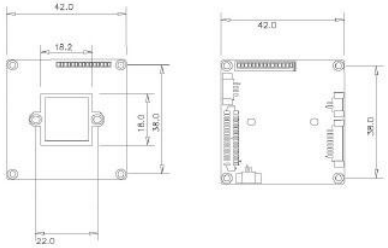
SPM-M22 *2M Mega Pixel Full HD Board Camera(42 x 42)*

FEATURE

- Panasonic 2M CMOS Image Sensor
- 1920 X 1080 30fps, 1280 X 720 60fps
- Composite Video Output (750TVL)
- BT 1120 Digital Output
- Digital Zoom Max 32x
- Wide Dynamic Range
- Privacy Mask Function
- Intelligent Motion Detection
- Multi Protocol Support

Ordering Number

- SPM-M22 : 2.8mm Fixed Lens
- SPM-M22V : 2.8 - 12mm Varifocal Lens



SPECIFICATION

Model	SPM-M22
VIDEO	
Image Device	1/3 Inch Panasonic CMOS
Total Pixels	2010(H) x 1108(V) = 2,227,080 (pixel)
Effective Pixels Number	1944(H) x 1092(V) = 2,122,848 (pixel)
Scanning System	Progressive
Resolution	Digital : 1920x1080p(30fps), 1280x720p(60fps) / Analog : 700TVL
Min. Illumination	Color : 1.0Lux, B/W : 0.5Lux, B/W DSS : 0.001Lux
S/N Ratio	More than 50dB (AGC OFF)
Video output	Digital : HD-SDI, Analog : NTSC/PAL 1.0Vp-p 75 Ohm Composite (Without WDR)
BOARD LENS	
Mount Type	Board (M12 X 0.5Pitch)
Lens Type	Manual (Fixed)
Focal length	2.8mm
Angular Field of View	D=143°/H=82.98°/V=73.9°
Max. Aperture Ratio	F1.8
VARIFOCAL LENS	
Mount Type	Board (Φ14)
Lens Type	Varifocal DC Auto iris lens
Focal length	2.8 ~ 12mm
Angular Field of View	D=133.13 ~ 34.66°/H=82.98 ~ 27.8°/V=73.9 ~ 20.88
Max. Aperture Ratio	Auto F1.2 ~ 360
OPERATIONAL	
Exposure	Auto / Manual
Shutter speed	1/30 (1/25) ~ 1/30,000sec
Brightness	0 ~ 20 Steps
AGC (Auto Gain Control)	0 ~ 20 Steps
Sens-up (Frame Integration)	X4
Backlight Compensation	Off / WDR / BLC
Day & Night	Auto / Day / Night / Ext
White Balance	Auto / Preset / Manual / Indoor / Outdoor
Image	Sharpness / Mirror / Freeze / E.Zoom / Shading / HLMASK / ACE / DNR

DNR (Digital Noise Reduction)	Off / Low / Middle / High / Auto
ACE	Off / On
HLMASK	Off / On
Digital Zoom (E.Zoom)	Off / On (1x ~ 32x)
Shading	Off / On
Freeze	Off / On
Mirror	Off / H / V / H & V
Intelligence Alarm	Privacy / MD
Privacy Masking	Off / On (32Point)
Motion Detection	Off / On (4Point)
Special	Shading Det / Defect Det / Dout Format / Dout FPS / PG / CVBS / COMM
Shading Det	Off / On
Defect Det	Off / On
Dout Format	1080p / 720p
Dout FPS	25 / 30
PG	Off / On
CVBS	Off / On
COMM	ID (1 ~ 255) Baudrate : 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200 Protocol : Pelco-P / Pelco-D / Update
Display	Disp Sel / Set Title
Disp Sel (Off/On)	ID / Title / Zoom Ratio
Set Title	Text Edit
OSD Language	English
ENVIRONMENTAL	
Operating Temperature	-10℃ to +50℃ (14°F ~ 122°F)
Operating Humidity	Less than 80% RH
ELECTRICAL	
Input Voltage	DC12V ±10%
Power Consumption	Max. 2.1W (170mA)
MECHANICAL	
Color	White
Material	ABS
Dimensions	Φ112 x 87mm
Weight	

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PSD-2020MHD

Full HD, HD-SDI, Built-in 20x optical lens high speed PTZ Dome Camera

High Definition solution to your business and security

FEATURES

• Built-in HD SDI driver (SMPTE 274M, SMPTE 296M compatible. 720p/1080i)
• Built-in 20x Optical Power Zoom Camera
• Auto Wide Dynamic
• Auto ICR
• Digital Noise Reduction
• 248 Presets programmed with view direction, zoom, focus and AE
• 8Tours consist of Preset, Pattern, Auto-Scan and other Tours can be programmed with over 377 functions and Preset location
• While moving, each Preset scan can be watched in smooth Diagonal Scan mode
• 16 Auto Scans supports diagonal move with zoom and the endless Auto-Pan with 8 speed steps
• 8 Patterns (up to 480 second)
• 24 Area Titles
• Variable speed from 0.1°/sec to 420°/sec. Turbo speed is Max 420°/sec when the TURBO key is pressed
• Optional 8 Alarm inputs with 0~8 priority / 2 Auxiliary outputs programmable
• 8 Privacy Zones: Video off, up to 8 masked blocks or 4 Polygonal mask zones
• Addressable up to 999 camera IDs (Extendable up to 3999 in special mode)
• Built-in RS-485 receiver driver
• On-site firmware upgrade and upload/download of programmed data into the KBD or base on the PTZ Dome camera (Full function version only)
• Built-in power-line surge protection and lightning protection
• Optional Tinted Bubble, Indoor & Outdoor pendant housing with heater & blower, Indoor Flush Mount, Parapet mount & Roof Top mount
• Adaptive tilt limit control according to the zoom ratio provides more useful picture
• Temperature sensing heater control
• Block mode alarm preset provides a useful scanning method
• On screen popup menu provides a easy way to control the dome system using simple keyboard
• Adaptive tilt limit control according to the zoom ratio provides more useful picture
• Graphical on screen display

SPECIFICATION

Model	PSD-2020MHD
Image Sensor	1/2.8" Exmor CMOS Sensor
Picture Elements	3270K pixel
Resolution	1920x1080p (30/25), 1920x1080i (60/50),1280x720p (60/50)
Lens	20x optical zoom with auto focus 12x digital zoom F1.6 to F3.5, f=4.7mm to 94.0mm
View Angle	Approx. 55.4 (WIDE end) to 2.9 (TELE end) – 1080i mode
Minimum Illumination	0.5 lux (1/30s, 50%, High Sensitivity mode ON) 0.08 lux (F1.4,1/4S(NTSC) OR 1/3S(PAL),High Sensitivity mode ON) 0.005 lux (1/4s with IR Cut Filter Removed, High Sensitivity mode ON)
S/N ratio	More than 50dB
Input Voltage	18 to 30V AX : 24V AC nominal, built-in power-line surge
Power Requirement	24V AC / V DC 850mA
Power Consumption	Max. 20W
Alarm Output	2 Normal relays 24VDC/1A Max (selectable NC/NO)
Alarm Input	8 Normal dry contact (selectable NC/NO)

Control	RS-485 baud rate:2400 ~ 38400bps (default:9600bps)
Access Time	0.75second maximum preset recall time
ID (Camera Address)	Physical 999, Logical 3999
Weight	Approx 3.8Kg
Pan Angle	360° continuous rotation
Speed	0.1° to 105°/sec (Proportional to Zoom) 420°/sec. maximum (with Turbo key pressed) 420°/sec. Pre-set speed
Repeatability	0.2°
Flip	Rotate 180° at bottom of tilt
Auto scan	16Autoscan include vector scan/ 1 Auto Pan
Preset Position	248 positions with camera status (16-character title)
Tour	8 tours
Pattern	8patterns, 480second
On Screen Display	Displays camera ID and area name on screen
Operating Temperature	0°C to 50°C
Operating Humidity	0 to 90% RH (Non-condensing)
Storage Temperature	-20°C to 60°C

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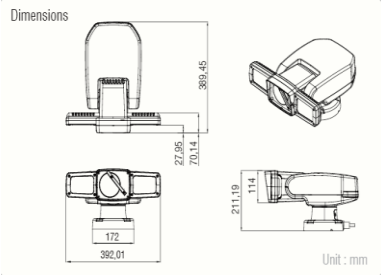
WTK-M202

Full HD, HD-SDI, Built-in 20x optical lens Rugged PTZ Camera with IR

High Definition solution to your business and security

FEATURES

- 1.3" 2M Pixel CMOS image sensor that support FULL HD
- Using progressive scan and Auto WDR
- 20x optical zoom and F1.6 aperture
- Good at low light environments using the Noise Reduction function
- Video signals can be output as digital and analog Y/Pb/Pr outputs
- A variety of digital output methods
- Auto ICR
- Up to 63 preset positions
- Variable speed control for all motorized functions
- 360 unobstructed rotation using the heavy duty long life slip ring
- All weather, lightweight, high impact aluminum die-cast enclosure (IP66)
- Built-in wiper system for constant load reduced noise
- Built-in Super IR LED 30pcs (Light distance 200m / manual focusing)
- Smart IR response by Auto Light Control (100steps)
- Auto position calibration by encoding data



SPECIFICATIONS

MECHANICAL		
Pan	Angle	360° Continuous pan
	Manual Speed	0.1° to 90°/sec (64step proportional to zoom)
	Preset Speed	150°/sec, ±0.1° Accuracy
Tilt	Angle	108° (±90°)
	Manual Speed	0.1° to 90°/sec (64step proportional to zoom)
	Preset Speed	150°/sec, ±0.1° Accuracy
Dimensions		392.01(W) x 211.19(H) x 389.45(D)
Weight		Less than 12.5kg
Motor	Holding Torque	13.5Kgf/cm, 1.35N.m
	Step Angle	1.8° Deg.
	Winding Type	Bipolar
ENVIRONMENTAL		
Ingress Protection		IP66
Construction		Aluminum
Temperature	Operating	-20°C ~ 50°C
	Storage Temp	-20°C ~ 60°C
	Fan	-10°C ~ 40°C (4step control)
	Heater	-10°C ~ 0°C (4step control)
Humidity		50% to 90%(4step control)
COMMUNICATION		
PTZ	Method	RS-422, RS-485
Power	Voltage	DC11.5V ~ DC30V, AC15 ~ AC30V(60Hz), Dual Power
	Current	DC15V, 8A / AC24V, 5A
	Heater / Fan	10W, 3.4W
VIDEO		
Video Out		HD-SDI -1channel (1920 x 1080 60i, 1920 x 1080 30P) CVBS -1channel, IP Web server (Option)
IR LED	Length	200m (Manual Focusing)
	Power	OSRAM 870n, 1W, 30EA

Image	1/3" CMOS Sensor
Picture elements	200K pixels
Lens	20x zoom F=4.7mm(Wide) to 94.0mm(TELE), F1.6 to F3.5
Digital zoom	12x (240x with optical zoom)
Angle of View	Approx. 55.4degrees(Wide end), Approx. 2.9degrees(TELE end)(1080i mode) Approx. 37.6degrees(Wide end), approx. 2.0degrees(TELE end)(720p mode)
Min. working distance	10mm(Wide end), 800mm(TELE end)
Sync system	Internal
Min. illumination	0.5lux/1/30sec., 50%(Interlace mode)(High Sensitivity mode ON) 1.7lux1/30sec., 50%(Typical value) 0.26lux 1/4 sec(NTSC), 1/3sec(PAL)(Typical value) / ICR-ON Mode 0.0005;ux/1/4sec(NTSC), 1/3sec(PAL)
Recommended illumination	100 to 100,000lux
S/N ratio	50dB (Weight ON)
BLC	On/Off
Electronic shutter speed	60/30 mode : 1/1 to 1/10000sec(22steps) 50/25 mode : 1/1 to 1/10000sec(22steps)
White balance	AUTO, ATW, Indoor, Outdoor, One Push WB, Manual WB, Outdoor Auto, Sodium Vapor
Gain	Auto/Manual (-3dB to +28dB, 16steps)
WDR	On / Off / Auto
Noise Reduction	On / Off (level 5 to 1 / Off, 6steps)
Color Enhancement	On / Off
Aperture control	16steps
Preset	6positions
Serial interface	VISCA protocol (TTL/CMOS) 9.6Kbps, 19.2Kbps, 38.4Kbps

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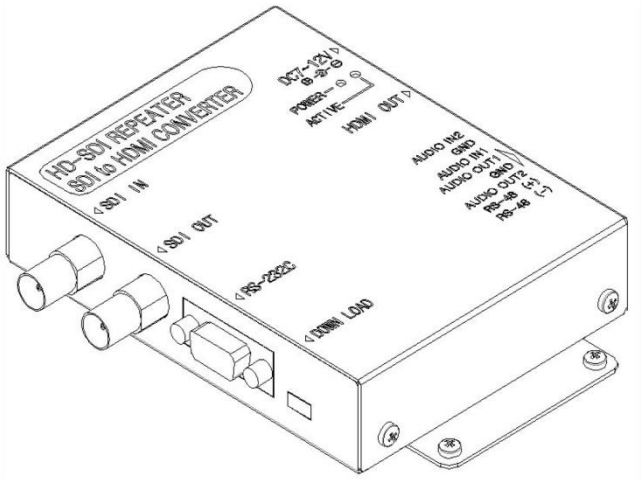
EZ-SHC-OSD

HD SDI to HDMI Converter with OSD Generator

FEATURES

- Converts HD-SDI to HDMI signal (SMPTE 292M, SMPTE 274M, SMPTE 296M compatible. 720p/1080i)
- HDMI transmitter is fully compatible with HDMI 1.3, compatible with HDMI 1.4a 3D and HDCP 1.4 compliance and also backward compatible to DVI 1.0 specifications
- Support remote Dome Control via the same SDI cable
- Built in OSD Generator
- Built in Coaxitron (Only HD-SDI Model)
- Support Multilingual (English, Chinese, Korean, ...etc)
- OSD Setup Program supports Screen Editor, Font Generator
- Variable Font Size and Color are selectable
- OSD Alpha Blending is available
- Variable Display Functions are selectable (Scrolling Vertical/Horizontal direction, Blinking, Timer)
- Support Video Masking



SPECIFICATIONS

Model	EZ-SHC-OSD
SDI Input	1 x BNC
SDI Output	1 x BNC
HDMI Input	1 x HDMI 19pin Type A (Female)
Serial I/F (OSD Generator)	USB or RS-232 (Female)
Serial I/F (Dome Control)	3p Terminal Block (RS-485)
Video Bandwidth	Up to 2.97 Gps (3G-SDI)
Video Resolution	HD 720p @ 50/60 Hz
	HD 1080i @ 50/60 Hz
	HD 1080p @ 25/30/50/60 Hz
Power Supply	12VDC 1A
Power Consumption	10W (max.)
Operating Temperature	0 to 50℃
Storage Temperature	-20 to 70℃
Dimension	150(W) x 113(D) x 27(H) mm

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HSC-G127

HD-SDI to HDMI convert with HD-SDI looping through out

High Definition solution to your business and security

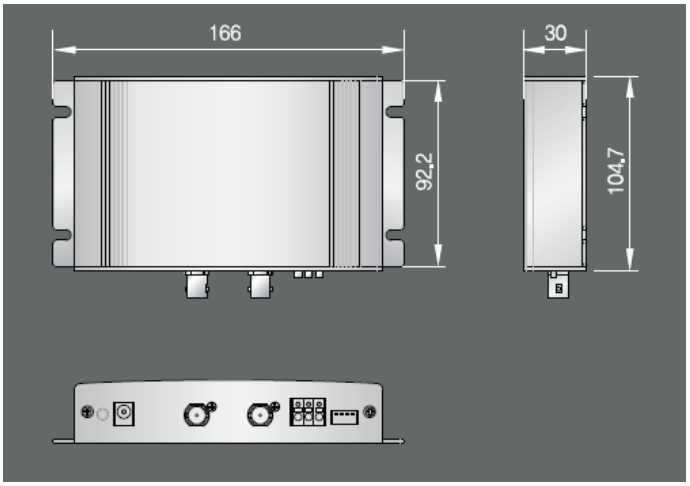
FEATURES

- Converter HD-SDI to HDMI in real time
- HD 1080p @ 60Hz Support
- HDMI 1.2
- RS-485 Control
- 1 x BNC : HD-SDI Looping Through Out

SPECIFICATIONS

Model	HSC-G127
Mode	NTSC/PAL
Bandwidth	2.97Gbps
HD-SDI Signal	SD525i&625i HD720P@24,25,30,50 and 60Hz HD1080i@24,25,30,50 and 60Hz
HDMI	HDMI 1.2
HD-SDI Single INPUT	1 x BNC : HD-SDI
HD-SDI Single OUTPUT	1 x BNC : HD-SDI Looping Through OUT
HDMI OUTPUT	19pin HDMI(Digital)
485(Out)	Single 75ohm coaxial bi-directional RS485 interface
Control Signal in the Coax	Yes
Power	AC110V ~ 230V, 50/60Hz ±1Hz, 4W Max.
Power Consumption	DC12V 0.25A Max.
Operating Temp	0°C to 40°C
Dimension	166(W) x 30(H) x 92.2(D)
Weight	0.6kg
Approval	FCC, CE, (UL)

DIMENSIONS



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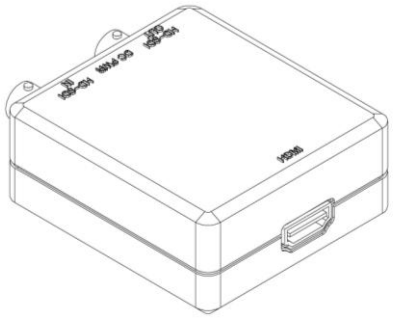
SDI_RX_HDMI-R1

Mini HD-SDI to HDMI convert with HD-SDI looping through out

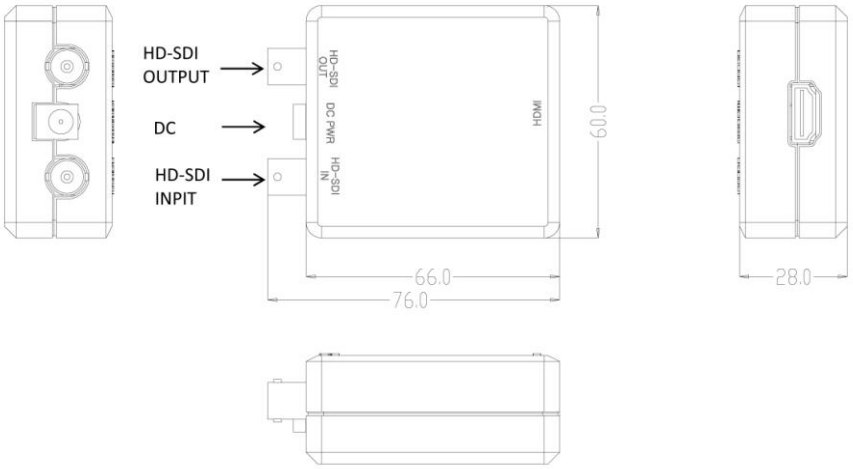
High Definition solution to your business and security

FEATURES



- Converter HD-SDI to HDMI
- SDI Receiver & Transmitter
- Supported HD Formats 720p, 1080i, 1080p
- HDMI without embedded audio

DIMENSIONS



SPECIFICATIONS

Model	SDI_RX_HDMI-R1
SDI standard	HD-SDI
Video Bandwidth	270Mb/s, 1.485Gb/s, 2.97Gb/s
Video Support	HD 720p / 24, 25, 30, 50, 60
	HD 1080i / 50, 60
	HD 1080p / 24, 25, 30, 50, 60
Input Signal	[HD-SDI] SMPTE 296M
Output Signal	[HD-SDI] SMPTE 296M
Output Impedance	75 Ohm
Cable Transmission	Greater than 150m

Audio Support	No
Input	1 x HD-SDI
Output	1 x HD-SDI, 1 x HDMI
Input Voltage	DC 12V (10 ~ 16V)
Power Consumption	DC : Max 1.1 [W]
Dimensions (L x W x H)	76 x 60 x 28 (mm)
Operation temp	0 ~ 40℃
In storage temp	-20 ~ +60℃
Operation humidity	Under 90% (non-condensing)

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HD & P

Miniature fiber optic 3G-SDI digital video extender

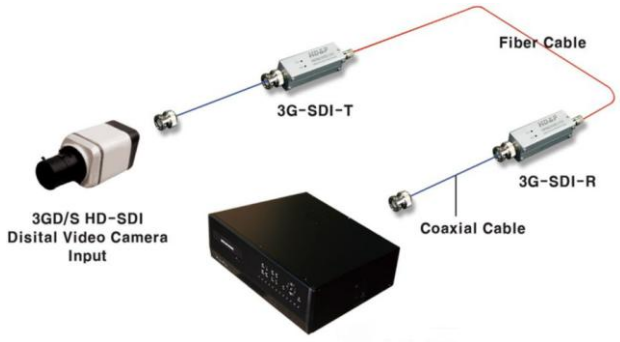
High Definition solution to your business and security

INTRODUCTION

ASTEL 3G-SDI extender, HD&P is a miniature, Fiber Optic 3G-SDI Digital Video Transport System and it supports the new 1080p, 3G-SDI format. The HD&P is designed to transport 1 channel SMPTE-424M 3G-SDI, SMPTE-292M HD-SDI or SMPTE-259M serial digital video signal over long distance through the single-mode or multi-mode.
Due to the use of advanced digital fiber optic transmission technology, The HD&P can handle SDI, DVB-ASI, HD-SDI, 3G-SDI and many other video formats. The power connector has a latch-locking mechanism, thus no power disruption due to miss-handing problem.

FEATURES

- Supports up to 3G-SDI
- Offers re-clocker included model SDIX-100c as an option
- Extends up to 20Km@1.485G, 10Km@3G
- Transports Multi-rate HD-SDI Digital Video over 1 Fiber
- Latch-locking Power connector
- HD-SDI BNC input connector and ST terminated fiber optical connector
- Robust metal die-casting enclosure for harsh environment



SPECIFICATIONS

DIGITAL VIDEO	
Signal Format	SMPTE-424M 3G-SDI, SMPTE-292M HD-SDI, SMPTE-259M SDI, And many others
Input Connector	75 Ohm SDI BNC
Data Rate	3Gbps
Signal Level	800Vp-p ±50mV

OPTICAL	
Fiber Type	Single-mode and Multi-mode
Number of Fibers	1
Output Connector	ST (Single-mode and Multi-mode)
Power Budget	Min. 11dB
Distance	20Km@1.485G, 10Km@3G

PHYSICAL	
Dimension(H x W x D)	19.5 x 19.5 x 50.7(mm)
Power Level	±5 VDC@1.5A
Operation Temperature	-20 ~ +70℃
Power Budget	Min, 11dB
Distance	20Km@1.485G, 10Km@3G

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